What is claimed is:

1. A barrel assembly of a zoom camera comprising:

a front lens frame where a front lens group is installed;

a front guide frame for supporting the front lens frame;

a zoom ring advancing and retreating along an optical axis of the front lens group;

an inner helicoid ring installed to be capable of advancing and retreating with respect to the zoom ring;

a rear lens frame where a rear lens group which is arranged on the same optical axis as the front lens group is installed; and

a cam unit formed at the zoom ring and an inner rotator which is installed at the inner helicoid ring to be capable of advancing and retreating, for adjusting the interval between the front lens group and the rear lens group as the front lens group moves.

2. The barrel assembly as claimed in claim 1, wherein the cam unit comprises:

a cam portion formed along an end portion of the zoom ring;

a protrusion formed at the outer circumferential surface of the inner rotator which is coupled to the inner helicoid ring by a guide means and contacting the cam portion; and

a coupling means installed at the inner rotator and the rear lens frame for advancing and retreating the rear lens frame with respect to the front guide frame.

3. The barrel assembly as claimed in claim 2, wherein the coupling means comprises:

a coupling protrusion formed on the outer circumferential surface of the rear lens frame; and

a cam groove formed along the inner circumferential surface of the inner rotator to be coupled to the coupling protrusion.

4. The barrel assembly as claimed in claim 3, wherein the cam groove comprises:

an entrance section for guiding entrance of the coupling protrusion;

an inclined section connected to the entrance section; and

an intermediary section extending from the inclined section to be linear, and the cam portion formed at the zoom ring comprises:

a zoom section corresponding to the intermediary section; and

an accommodating section formed at a portion corresponding to the inclined section to be inclined in a direction that is the same as the inclined section and opposite to the zoom section.

5. A barrel assembly of a zoom camera comprising:

a front lens frame where a front lens group is installed;

a front guide frame for supporting the front lens frame;

a zoom ring having a cam portion formed along an end portion of the zoom ring;

a rear lens frame where a rear lens group arranged on the same optical axis as the front lens group;

an inner helicoid ring coupled to the zoom ring by an advancing and retreating means;

an inner rotator advancing and retreating in a lengthwise direction by a guide means along the inner circumferential surface of the inner helicoid ring;

a cam unit, installed at the outer circumferential surface of the inner rotator and the zoom ring, for advancing and retreating the inner rotator during rotation of the inner helicoid ring, and including a coupling unit formed on the inner circumferential surface of the inner rotator and the outer circumferential surface of the rear lens frame, for advancing and retreating the rear lens frame during the rotation of the inner rotator; and

an inner guide ring, coupled to the front guide frame and the rear lens frame to be capable of sliding, for preventing the front guide frame and the rear lens frame from rotating.

6. The barrel assembly as claimed in claim 5, wherein the advancing and retreating unit comprises:

a helicoid female screw thread formed on the inner circumferential surface of the inner helicoid ring; and

a helicoid male screw thread formed on the outer circumferential surface of the zoom ring.

Sub A' (cont'd)

7. The barrel assembly as claimed in claim 5, wherein the cam unit comprises:

the coupling unit which comprises:

a guide protrusion formed on the outer circumferential surface of the rear lens frame; and

a cam groove formed in the inner circumferential surface of the inner rotator to be coupled to the coupling protrusion;

a cam portion formed along an end portion of the zoom ring; and

a protrusion formed on the outer circumferential surface of the inner rotator coupled by the inner helicoid ring and the guide unit and contacting the cam portion.

8. The barrel assembly as claimed in claim 7, wherein the cam groove comprises:

an entrance section for guiding entrance of the coupling protrusion;

an inclined section connected to the entrance section; and

an intermediary section extending from the inclined section to be linear, and the cam portion formed at the zoom ring comprises:

a zoom section corresponding to the intermediary section; and

an accommodating section formed at a portion corresponding to the inclined section to be inclined in a direction that is the same as the inclined section and opposite to the zoom section.

9. The barrel assembly as claimed in claim 5, wherein the front guide frame, the rear lens frame, and the inner guide ring are coupled to one another by first guide pieces formed on the outer circumferential surfaces of the front guide

frame and the rear lens frame at a predetermined interval and second guide pieces formed on the outer circumferential surface of the inner guide ring and inserted between the first guide pieces.

Sub A' (cont'd)

10. The barrel assembly as claimed in any of claims 5 through 9, wherein a spring for elastically biasing the front guide frame and the rear lens frame in the opposite directions is installed between the front guide frame and the rear lens frame.

11. A barrel assembly of a zoom camera comprising:

a front lens frame where a front lens group is installed;

a front guide frame for supporting the front lens frame;

a zoom ring having a cam portion formed along an end portion of the zoom ring;

a rear lens frame where a rear lens group arranged on the same optical axis as the front lens group;

an inner helicoid ring coupled to the zoom ring by an advancing and retreating unit;.

an inner rotator advancing and retreating in a lengthwise direction by a first guide unit along the inner circumferential surface of the inner helicoid ring;

a cam unit, installed at the outer circumferential surface of the inner rotator and the zoom ring, for advancing and retreating the inner rotator during rotation of the inner helicoid ring, and including a coupling unit formed on the inner circumferential surface of the inner rotator and the outer circumferential surface of the rear lens frame, for advancing and retreating the rear lens frame during the rotation of the inner rotator; and

an inner guide ring, coupled to the front guide frame and the rear lens frame to be capable of sliding, for preventing the front guide frame and the rear lens frame from rotating;

a guide ring coupled to the inner guide ring to be capable of advancing and retreating by a second guide unit;

a helicoid ring in which the guide ring is rotatably inserted and coupled to the inner helicoid ring by a third guide unit, for advancing and retreating the inner helicoid ring while rotating the inner helicoid ring during rotation of the helicoid ring; and

a driving unit for driving the helicoid ring.

Sub A' (cont'd)

12. The barrel assembly as claimed in claim 11, wherein the advancing and retreating unit comprises:

a helicoid female screw thread formed on the inner circumferential surface of the inner helicoid ring; and

a helicoid male screw thread formed on the outer circumferential surface of the zoom ring.

13. The barrel assembly as claimed in claim 11, wherein the cam unit comprises:

the coupling unit which comprises:

a guide protrusion formed on the outer circumferential surface of the rear lens frame; and

a cam groove formed in the inner circumferential surface of the inner rotator to be coupled to the coupling protrusion;

a cam portion formed along an end portion of the zoom ring; and

a protrusion formed on the outer circumferential surface of the inner rotator coupled by the inner helicoid ring and the guide unit and contacting the cam portion.

14. The barrel assembly as claimed in claim 13, wherein the cam groove comprises:

an entrance section for guiding entrance of the coupling protrusion;

an inclined section connected to the entrance section; and

an intermediary section extending from the inclined section to be linear, and the cam portion formed at the zoom ring comprises:

a zoom section corresponding to the intermediary section; and

an accommodating section formed at a portion corresponding to the inclined section to be inclined in a direction that is the same as the inclined section and opposite to the zoom section.

Sub A'

15. The barrel assembly as claimed in claim 10, wherein the front guide frame, the rear lens frame, and the inner guide ring are coupled to one another by first guide pieces formed on the outer circumferential surfaces of the front guide frame and the rear lens frame at a predetermined interval and second guide pieces formed on the outer circumferential surface of the inner guide ring and inserted between the first guide pieces.

16. The barrel assembly as claimed in any of claims 4 through 8, wherein a spring for elastically biasing the front guide frame and the rear lens frame in the opposite directions is installed between the front guide frame and the rear lens frame.

17. The barrel assembly as claimed in claim 11, wherein the third guide unit comprises a guide protrusion formed on the outer circumferential surface of the inner helicoid ring and the guide protrusion is coupled to a guide groove formed on the inner circumferential surface of the helicoid ring in a lengthwise direction by passing through a slot formed in the outer circumferential surface of the guide ring.